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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,048	04/06/2001	Han Golecki	050-96-018	5763
128	7590	10/20/2004	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			BRUNSMAN, DAVID M	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/828,048	Applicant(s) GOLECKI, IIAN	
	Examiner David M Brunzman	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,10,11,13 and 22-28 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,5,10,11,13 and 22-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: ____ | 6) <input type="checkbox"/> Other: ____ |

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Applicant's amendment has been carefully considered. The rejections over US Patent 4737379 are withdrawn in view of the amendment made. Claims limited to those including compounds of Si, O and C are allowable over the prior art of record. The prior art of record fails to teach or suggest the improved high temperature oxidation resistance for the recited carbon containing substrates obtained with coatings of compounds of Si, O and C. Claims 1, 5, 10, 11, 13 and 22-28 are pending.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 11, 13, 22, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4515860.

The reference teaches coating of carbon-carbon composites with a composition comprising non-stoichiometric amounts of silicon and at least one of C, O, Al or, N to obtain oxidation resistance at temperatures over 500 C. See column 1, line 18 and column 2, lines 4-29. The disclosure of the coating composition reaction with the substrate at the interface is considered to anticipate a graded coating.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4515860 in view of US Patent 4673551.

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US 4515860 teaches carbon-carbon composites having a coating similar to that recited in the instant claims, as set forth above, but does not explicitly disclose a plate-fin heat exchanger. US 4673551 is representative of a large body of art discloses plate-fin heat exchangers. It would have been obvious to one of ordinary skill in the art to coat the surfaces of the heat exchanger with the film disclosed by US 4515860 because that reference teaches they resist oxidation at high temperature.

Claims 1, 5, 11, 13, 22-25, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5258224.

The reference teaches graded multilayer coating a carbon-carbon composite with a composition comprising a polysilazane (a compound of silicon, carbon and nitrogen) to form a high temperature oxidation resistant product. See Example II.

Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5258224 in view of US Patent 4673551.

US 5258224 teaches carbon-carbon composites having a coating similar to that recited in the instant claims, as set forth above, but does not explicitly disclose a plate-fin heat exchanger. US 4673551 is representative of a large body of art discloses plate-fin heat exchangers. It would have been obvious to one of ordinary skill in the art to coat the surfaces of the heat exchanger with the film disclosed by US 4515860 because that reference teaches they resist oxidation at high temperature.

The above references are representative of a large body of prior art disclosing high temperature oxidation resistant coatings for carbon components, which coatings having compositions similar to the instant claims.

The references cited, but not relied upon for rejection, are considered pertinent to applicant's claims.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, W, F, Sa; 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David M Brunzman
Primary Examiner
Art Unit 1755

DMB

A handwritten signature in black ink, appearing to read 'David M Brunzman', with a long horizontal stroke extending to the right.